a gate structure including a gate oxide layer formed on the upper surface of the substrate, a first gate layer formed on the gate oxide layer, an adhesion layer formed on the first gate layer, and a conductive silicide layer formed on the adhesion layer, the gate structure having a trench at least partially disposed therein and extending into the substrate substantially perpendicularly to the upper surface of the substrate; and

a field oxide layer at least partially in the trench, the field oxide layer having sides that are substantially straight and substantially parallel from a bottom of the trench to a top surface of the field oxide layer, the substantially straight sides not contacting the gate oxide layer, the substantially straight sides extending upwardly from the trench substantially perpendicularly to the upper surface of the substrate and past the upper surface of the substrate above adjacent structures on the upper surface of the substrate, the substantially straight sides not extending laterally from the trench over the upper surface of the substrate, the top surface of the field oxide layer being between the level of the upper surface of the substrate and the level of an upper surface of the first gate layer.

24. (Twice Amended) The microelectronic device of claim 22 wherein the silicide layer comprises tungsten silicide.

25. (Twice Amended) The microelectronic device of claim 22, further comprising a thin layer of oxide formed on the silicide layer.

26. (Four Times Amended) A microelectronic device, comprising:

a silicon substrate having a trench formed in a surface thereof, the trench extending into the substrate substantially perpendicularly to the surface of the substrate and being bounded on all sides by the substrate;

a field oxide in the trench, the field oxide having sides that are substantially straight and substantially parallel from a bottom of the trench to a top surface of the field oxide, the substantially straight sides projecting outwardly from the trench beyond the surface of the substrate, and beyond any adjacent structures on the surface of the substrate, substantially

perpendicularly to the surface of the substrate and not extending laterally from the trench over the surface of the substrate; and

a component formed on the field oxide, the component extending from the field oxide by a height at least equal to approximately two times a height that the field oxide extends from the trench beyond the surface of the substrate, the component comprising an adhesion layer formed on the field oxide and a conductive silicide layer formed on the adhesion layer.

28. (Four Times Amended) A microelectronic device, comprising:

a microelectronic substrate having a trench formed in a surface thereof, the trench extending into the substrate substantially perpendicularly to the surface of the substrate;

a field oxide in the trench, the field oxide having sides that are substantially straight and substantially parallel from a bottom of the trench to a top surface of the field oxide, the substantially straight sides extending from the trench beyond the surface of the substrate and above any adjacent structures on the upper surface of the substrate, the substantially straight sides extending substantially perpendicularly to the surface of the substrate and not extending laterally from the trench over the surface of the substrate; and

a gate structure formed on the substrate, the gate structure extending from the upper surface of the substrate by a height at least equal to approximately two times a height that the field oxide extends from the trench beyond the surface of the substrate, the field oxide not contacting any portion of the gate structure.

30. (Four Times Amended) A microelectronic device, comprising:

a microelectronic substrate having a recess formed in a surface thereof, the recess extending into the substrate substantially perpendicularly to the surface of the substrate; and

a field oxide deposited in the recess, the field oxide having sides that are substantially straight and substantially parallel from a bottom of the recess to a top surface of the field oxide, the substantially straight sides extending substantially perpendicularly to the surface of the substrate from the recess and beyond the surface of the substrate by a height which is less than or equal to approximately one half of a height of a component formed on the field oxide, the

field oxide not extending laterally from the recess over the surface of the substrate, and the field oxide extending above adjacent structures on the upper surface of the substrate.

32. (Five Times Amended) A microelectronic device, comprising:

a microelectronic substrate having a trench formed in a surface thereof;

a gate structure formed on the substrate, the gate structure including a gate oxide layer formed on the microelectronic substrate, a first gate layer formed on the gate oxide layer, an adhesion layer formed on the first gate layer, and a conductive layer formed on the adhesion layer; and

a field oxide deposited in the trench, the field oxide extending substantially perpendicularly to the surface of the substrate from the trench beyond the surface of the substrate and above adjacent structures on the upper surface of the substrate by a height which is less than or equal to approximately one half of a height of the gate structure formed on the substrate, the field oxide having sides that are substantially straight and substantially parallel from a bottom of the trench to a top surface of the field oxide, the substantially straight sides not contacting the gate oxide layer and not extending laterally from the recess over the surface of the substrate.

34. (Four Times Amended) A microelectronic device, comprising:

a microelectronic substrate having a surface with a trench formed therein;

a field oxide within the trench and having sides that are substantially straight and substantially parallel from a bottom of the trench to a top surface of the field oxide, the substantially straight sides projecting therefrom substantially perpendicularly to the surface of the substrate and above adjacent structures on the upper surface of the substrate by a height which is small enough to prevent the formation of spacers adjacent the field oxide, the field oxide not extending laterally from the trench over the surface of the substrate; and

a component formed on the field oxide.

38. (New) The microelectronic device of claim 22 wherein a first distance measured from the top surface of the field oxide layer to the level of the upper surface of the

substrate is up to one half of a second distance measured from the level of the upper surface of the substrate to the upper surface of the gate structure.

39. (New) The microelectronic device of claim 26, further comprising a gate structure including a gate oxide layer formed on the upper surface of the substrate, the gate structure extending from the upper surface of the substrate to a height at least equal to approximately two times a height that the field oxide extends from the trench beyond the surface of the substrate, the field oxide not contacting any portion of the gate structure.

40. (New) The microelectronic device of claim 26 wherein the silicide layer comprises tungsten silicide.

41. (New) The microelectronic device of claim 26, further comprising a thin layer of oxide formed on the silicide layer.

42. (New) The microelectronic device of claim 30 further comprising a gate structure including a gate oxide layer formed on the upper surface of the substrate, the gate structure extending from the upper surface of the substrate to a height at least equal to approximately two times a height that the field oxide extends from the trench beyond the surface of the substrate, the field oxide not contacting any portion of the gate structure.

43. (New) The microelectronic device of claim 34, further comprising a gate structure including a gate oxide layer formed on the upper surface of the substrate, the gate structure extending from the upper surface of the substrate to a height at least equal to approximately two times a height that the field oxide extends from the trench beyond the surface of the substrate, the field oxide not contacting any portion of the gate structure.

REMARKS

Claims 22 and 24-37 are pending in the application. In the Office Action dated July 1, 2002, the Examiner took the following action: (1) rejected claims 22 and 24-37 under 35